

## Flies Collected in Bait Traps

By D. ELMO HARDY

During December 1950, and January 1951, bait trap collections of flies from Oahu were turned over to me for identification by P. L. Gow. Except for one collection made at Waimanalo, all of these were from Maunawili. The bait consisted of casein hydrolysate plus a complete complement of synthetic B vitamins. Except for one sample, which was six days old, the baits were left in the field for three days. This bait was very highly attractive to blow flies of the genus *Chrysomyia* and to many other scavenger flies. Each sample studied consisted of about three-fourths of a quart of flies. The great bulk of these collections was made up of Calliphoridae. The bait was most attractive to the females of all of the species which were seen in the samples. Eighty-five to ninety-five per cent of the specimens were females.

Because of the very large numbers of individuals involved, actual counts of the specimens were not made. The criteria for recording the relative abundance per sample of the species are as follows: Very abundant = one thousand + to many thousands of individuals; abundant = one hundred + to one thousand; moderate = ten to one hundred; scarce = less than ten individuals seen. Approximately two-thirds to three-fourths of each sample was sorted as carefully as possible so that a fair cross-section could be obtained.

The following Diptera were observed in these collections:

### CALLIPHORIDAE

*Chrysomyia megacephala* (F.), very abundant.

*C. rufifacies* (Macquart), abundant.

*Rhinia testacea* Robineau-Desvoidy, scarce.

### MUSCIDAE

*Fannia pusio* (Wiedemann), moderate to abundant.

*Atherigona excisa trilineata* Stein, abundant to very abundant.

*A. hendersoni* Malloch, abundant (none in the collection from Waimanalo).

*Ophyra nigra* (Wiedemann), moderate.

*Limnophora arcuata* Stein?, scarce to moderate.

*Musca domestica* L., scarce to moderate.

*Synthesiomyia brasiliiana* Brauer and Bergenstamm, scarce.

Genus and species?, scarce.

### SARCOPHAGIDAE

*Sarcophaga orientaloides* Senior-White, moderate.

*S. peregrina* Robineau-Desvoidy, scarce.

**DROSOPHILIDAE**

- Drosophila melanogaster* Macquart, scarce to moderate.  
*Drosophila spinofemora* Patterson and Wheeler, moderate.  
*Drosophila busckii* Coquillett, scarce to moderate.  
*Drosophila immigrans* Sturtevant, scarce to moderate.  
*Drosophila mercatorum* Patterson and Wheeler, scarce.  
*Drosophila ananassae* Doleschall, scarce.  
*Drosophila repleta* Wollaston, scarce.  
*Drosophila* n. sp.? (native), scarce.  
*Drosophila* n. sp.?, scarce.  
*Gitona perspicax* (Knab), scarce.

**TEPHRITIDAE**

- Dacus dorsalis* Hendel, 10-15 per sample.  
*D. cucurbitae* Coquillett, scarce (1 seen).

**CHLOROPIDAE**

- Cadrema pallida* (Loew), moderate.  
*Rhodesiella scutellata* (Meigen), moderate.  
*Siphunculina signata* Wollaston, scarce to moderate.  
*Chlorops* (sens. lat.) sp.?, moderate.  
*Gaurax* (sens. lat.) *bicoloripes* Malloch?, moderate.

**OTITIDAE**

- Euxesta quadrivittata* Macquart, scarce.  
*Chrysomya aenea* Grimshaw, scarce.

**SYRPHIDAE**

- Volucella* (*Ornidia*) *obesa* (F.), scarce.

**CULICIDAE**

- Culex quinquefasciatus* Say, scarce.

**CHIROMYIDAE**

- Chyromyia* sp? related to *flava* (L.), scarce.

**MYCETOPHILIDAE**

- Genus and sp.? (poor condition), scarce.

**PHORIDAE**

- Megaselia scalaris* Meigen, scarce.  
*Puliciphora* ?, scarce.

**SPHAEROCERIDAE**

- Limosina punctipennis* (Wiedemann), scarce.

**PIOPHILIDAE**

- Piophila casei* (L.), scarce.

**LONCHAEIDAE**

- Lamprolonchaea aurea* (Macquart), scarce (1 specimen seen).

This is the first record of the family Lonchaeidae occurring in Hawaii. This same species has been seen recently in a collection from Canton Island. This will be reported as soon as the collection is worked up.

The Chloropidae genera *Chlorops* (sens. lat.) and *Gaurax* (sens. lat.) have not been previously recorded from Hawaii. These were identified by C. W. Sabrosky of the U. S. National Museum who says he may be able to place the *Chlorops* after he has studied it more completely. The species which I sent to him under the tentative identification of *Gaurax*?, he indicated as "*Oscinosoma*" *bicoloripes* Malloch. He made the following comments regarding this species: "The other is also a generic problem. Tentatively these specimens seem to be the same as *bicoloripes* described by Malloch from the Marquesas (Bishop Mus. Bull. 114: 30, 1935). Malloch described this as *Oscinosoma*, but this is far off. In later publications he called this group *Botanobia*, which is closer. *Gaurax* (sens. lat.) is the best at the moment. This group is very common in the South Pacific and I have a number of species before me."

It is interesting to note that seven out of the ten known introduced species of *Drosophila* were present in these collections.